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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/078,352	02/21/2002	Juergen K. Puetter	941939	5060

7590 01/07/2004  
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CANADA

EXAMINER

LITHGOW, THOMAS M

ART UNIT PAPER NUMBER

1724

DATE MAILED: 01/07/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/078,352

Applicant(s)

PUETTER ET AL.

Examiner

Thomas M. Lithgow

Art Unit

1724

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-35 is/are pending in the application.
- 4a) Of the above claim(s) none is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-22, 24-29 and 31-35 is/are rejected.
- 7) ☒ Claim(s) 23 and 30 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 05282002.

- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

*Thomas M. Lithgow*  
Thomas M. Lithgow

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-4, 5-6, 11-14, 16-17, 21-22, 25-29 and 32-35 are rejected under 35 U.S.C. 102(b) as being anticipated by WO 93/24413. WO '413 discloses a multiple step process in which a wastewater feed at 12 is subjected to a flotation step in a first clarification tank 30 in the presence of ozone which is derived from the ozone generator 40. The once clarified water is then directly contacted with ozone and subjected to a second tank clarifier 31. The twice cleaned water is then contacted with ozone again and sent to a contact tower 38. A first portion (about 70%) of the water from the contact tower is recycled to both tanks 30 and 31 after being again contacted with ozone and a second portion (about 30%) is removed and polished via line 77 as a purified water outlet. In rejecting the claims, the examiner interprets the first tank 30 as a "solids separation tank" and the

second tank 31 as "an oxidation tank". It is inherent to the operation of the second tank that oxidation of chemical and biological wastes is occurring. It is stated by WO '413 at pg. 5, lines 1+, the "delineation between stage one of the process ... and stage two ... tends to be somewhat blurred". Clearly some oxidation is occurring in the once cleaned water being sent to tank 31.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 5, 15, 24 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO '413 as applied to claims 1, 11, 21, and 29 respectively above, and further in view of O'Cheskey (US 4255262). The use of a nozzled discharge means with an opposing baffle plate in a recycle flotation device to promote mixing and flotation is taught by O'Cheskey (see fig. 3 version). To modify the injection nozzles of WO '413

would have been obvious to one of ordinary skill in view of O'Cheskey's teaching of superior results using such a discharge nozzle.

5. Claims 8 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO '413 as applied to claims 1 and 11 above, and further in view of Japan 56-141891. JP 56-141891 discloses that it is known that the excess ozone gas from a flotation process employing ozone is harmful to humans and must be destroyed before being discharged to the atmosphere. To so modify WO'413 would have been obvious to one of ordinary skill.

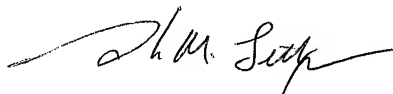
6. Claims 9 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO '413 as applied to claims 1 and 11 respectively above, and further in view of either one of Wang (US 5256299) or JP 2000-051874. The use of UV light to aid in the oxidation of contaminants by ozone in a liquid system is disclosed by either of the above two patents. JP '874 specifically discusses the formation of hydroxyl ions to help eliminate hardly decomposable substances (hard to get rid of). To so modify WO '413 to include the desirable UV would have been obvious to one of ordinary skill in the art.

7. Claims 10 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO '413 as applied to claims 1 and 11 respectively above, and further in view of EP 261822. The grinding of sewage prior to treatment by ozonated flotation is taught by EP 261822 (col. 1, line 23). Such grinding breaks up clumps to form a slurry which is more readily handled by the process. To so modify WO '413 with such a step would have been obvious to one of ordinary skill in the art.

8. Claims 23 and 30 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thomas M. Lithgow whose telephone number is 571-272-1162. The examiner can normally be reached on Mon. -Fri..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Blain Copenheaver can be reached on 571-272-1156.



Thomas M. Lithgow

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Primary Examiner  
Art Unit 1724

TML